



MARCH, 1952

The  
University of Toronto  
and  
Engineering  
Alumni Associations



Congratulate the  
Class of 5T2  
and  
Request its support in the  
coming years

**Be a Paid-up Supporter !**

UNIVERSITY OF TORONTO  
ENGINEERING ALUMNI OFFICE  
42 St. George St.  
Toronto, Ont.

# TOI KE OI KE

MARCH, 1952



Published every now and then by the

University of Toronto  
Engineering Society





## *To Schoolmen*

I am grateful to the Editor of Toike Oike for inviting me to address a few words to the students of the Faculty of Applied Science and Engineering. Now that Toike Oike embraces the functions of both magazine and year book for your Faculty, its task becomes very significant. It provides a concentration point for your interest and enthusiasm.

In all divisions of the University, college and faculty enthusiasms are healthy phenomena. The University family is all the stronger when each member speaks with a resonant voice. It is scarcely necessary, however, for anyone to advise Engineering students to cherish their loyalty to "The School". The School Spirit is an ectoplasmic entity with remarkable properties of endurance and tensile strength. Invoked the world over by mystic words wherever two or three Schoolmen are gathered together, it will always rise to the occasion; it cannot be demolished by time or space. It is — to change the metaphor — a deep-rooted, well-watered, luxurious plant, and will flourish without the aid of official blandishments.

Your sense of comradeship has, it seems to me, its principal source in the fact that you have joined together to solve, by knowledge, skill, and thought, problems that are immediate and perplexing in our society. You know now, and as you pursue professional careers you will realize more fully, the power that you wield. The engineer is more than a technician; he is a man who works closely with other men, and the problems that he solves are, in the last analysis, human problems. They call on all our human resources of will, mind, imagination and spirit. I am sure that you will neither shirk nor bungle the task.

*Frederic Smith*



## *A Thought for 5I2*

A writer once claimed that engineers should test any proposal by applying these two questions: "Why do this at all?" and, "Why do it this way?"

Novelty of design has a great appeal to the young engineer. He likes to depart from the conventional way of doing things (and to this fact we owe most of our technological progress). As a result of wishing to be different, two undesirable consequences frequently result. The first is that the engineer makes a lot of unnecessary work for himself. He could have adopted the conventional solution very quickly instead of spending much labour evolving a solution of his own. The second is that far too frequently his own solution does not have as much merit as the conventional one.

A characteristic attributed to older men (an older man is anyone who is 15 or more years older than you are) is that they are conservative. They do not like change and will continue to do things in the way they have always been done and to which they themselves have become accustomed.

I sometimes think how wonderful it would be if we could evolve a race of men who had the attributes of old men when they were young and of young men when they were old. We would then have young engineers with a disposition to adopt a conventional design rather than to depart on a design path of their own choosing. This would result in enormous saving of time. We would also have older men desiring to bring in new ideas and be original. At this age their wisdom and experience might enable them to make a real contribution.

This is the final issue of "Toike Oike" for this year and this message is intended for the graduating class. I would like to leave with them the idea that they can perhaps of their own volition adopt some of the characteristics of the age to which they do not belong. This is an experiment which might bring high dividends: to adopt the caution of maturity before one's time and retain the rebellious spirit of youth after it. Is it worth trying?

*L. F. Jupp*





## President's Message

The end of another year has rolled around with almost frightening speed. To many of us in 5T2 this would seem the way it should be — we with our impatience and eagerness to run our own little shows, as Joe Engineer, B.A.Sc., P.Eng. But most of us, I think, will be struck by a slightly wistful, and a very sentimental feeling when we cross that green sward to receive our diploma next June. We're going to be sorry to leave.

Perhaps the best way in which we could show our appreciation of these four or five of the best years of our lives, would be to keep dropping back to the old Skulehouse whenever we're in the vicinity, and to take an interest in our University and our own Engineering Alumni organization. It could be that other fellows like ourselves will need our help and advice in their student years to come — in their academic pursuits, or in their Engineering Society and their Athletic Association. That word "Professional" in "P.Eng." stands for this kind of thing in any case; let's keep an eye on this Alma Mater of ours.

March seems to be the month for examining everything in retrospect. To say that all things went smoothly in Engineering Society affairs would indeed be a fallacy: but it does seem to have been a good year.

It has also been a quiet year. No crowds of "Godiva"-chanting Skulemen have been noticed marching on U.C.; the Chariot Race was orderly beyond words.

And, it has been a disappointing year at times. Skule Nite had to cancel one performance because of low attendance; the Skule Dinner was impressive, but poorly attended; and staff help had to be procured to clear enough lunch-eaters out of a drafting room

(lectures had been cancelled) in order to complete a quorum at a noon-hour General Meeting.

However, disappointment and quiet have given birth to a happy offspring: they have enabled the executive to study some of the fundamental things we do here at Skule, to see if the right activities are being carried on, to see whether or not Skule and Skulemen have changed without the Engineering Society following suit. We have a Constitution Committee, a Tuck Shop Committee; a student vote has approved the first Engineering Society fee increase in ten years; an election poll has favoured a return to the Toike Oike newspaper, in addition to a Quarterly or Yearbook. These things we know because we have had a chance to slow down, to house-clean, and to find them out.

And yet all has not been disappointment, by any means. We of 5T2 have just experienced a tremendously successful function—our Grad Ball, the best in years. That same election poll has indicated that no fewer than *fifty Skulemen* would be willing to work actively on a Skule publication. There seems to be a rising response in the lower years, in 5T3, in particular—a resurgence of School Spirit as it used to be—and, happily, accompanied by a fairly keen sense of responsibility.

In any year-end thoughts, I should like, naturally, to stop and thank individually each member of the executive, and every man on every committee, for the job he or she has done for Skule. I would need 100 pages. The point is that every single person, in his own particular manner, has put in a tremendous amount of work—all for Skule, and mostly without fanfare—and without these stalwart helping hands it would have been absolutely impossible to tackle the fundamental problems facing us as an Engineering Society. A very definite word of thanks must also go to those Faculty members who have helped us with their words of advice.

The two brightest lights in the group, I feel, are Jack Cooper, ("Coop"), who has put all of his unceasing energies into the duties of 2nd Vice-President, despite many obstacles along the way, and Paul Hutchison, ("Hutch"), who has always seemed to be available, ready and willing, to do any job needing fulfilment, regardless of his other duties with Skule Nite and the 5T2 Grad Ball.

All of us of 1951-52 say "Good Luck" to those who follow under the extremely able leadership of Jack Cooper, and we do this with minds at ease because we know that next year's Engineering Society is in very, very good hands. You couldn't wish for a better executive and a brighter outlook. Get behind them and make Skule Spirit really have a meaning — and then will truly professional men and women be graduating from School every spring.

*Douglas R. Sherk.*

## Treasurer's Report

Every year since the end of the Ajax the enrollment in the Engineering faculty has decreased. Since the income the Engineering Society receives from student fees varies directly as the enrollment, the income has been decreasing proportionately. Thus every new Engineering Society Executive has been faced with the problem of providing superb social functions, keeping prices down, and doing with less money. To make matters worse the buying power of the revenue has been decreasing continually.

The enrollment of S.P.S. has now almost levelled off and stands at approximately 1,600 students — a far cry from the 4,500 in its heyday of Ajax. With this small body, this year's executive has really felt the pinch. To avoid the perils of the red, drastic cuts in subsidies for various functions were necessary. As well, the mark-up on goods sold in the Stores was raised to 30%. By these bold moves, the Engineering Society 1951-52 will remain in the black, but that is all.

Although the Society has remained solvent, the executive feels it has not provide the services it should. After much thought and debate, it was concluded that the only solution was an increase in revenue, and for this there seemed only one source, the student fees. Again, after much discussion, the executive decided that approx. \$4,800 more was needed, which would mean a further \$3 from each student.

The next step was to obtain the approval of the student body. A general Meeting was called, but the turnout was less than a quorum. However, after an intensive and extensive publicly campaign, another General Meeting was called, and this time the turnout was large enough. The Eng. Soc. solidly backed the proposal of its executive with a 254-41 vote. Now this proposal must be approved by the Faculty Council and the Board of Governors consecutively.

Under the able leadership of James Allen, every major function kept within its budget. The Stores were operated very efficiently under the guidance of Jack Cooper. Paul Hutchison, Producer of Skule Nite, is to be commended and thanked for the effort on his part which resulted in spending only \$190 of a \$500 subsidy granted the production.

Following is the estimated budget of the Eng. Soc. 1951-52:-

REVENUE	Sept. '51	Revised Jan. '52	
Student Fees .....	\$ 4,500	\$ 4,800	
Interest on Investments .....	120	120	
Gross Profit on Sales @ 23% .....	5,980	6,900	
		\$10,600	\$11,820
EXPENDITURES			
(a) Operating Expenses			
Salaries .....	\$ 3,000	\$ 3,000	
Accountant .....	275	275	
Audit .....	175	175	
Insurance .....	100	100	
Office Supplies .....	100	300	
Alterations to Stores .....	100	30	
Office Equipment .....	50	---	
Depreciation .....	200	200	
Sundries and postage .....	125	125	
Telephone .....	150	175	
Unemployment Insurance .....	40	50	4,430
(b) Functions and Services			
Clubs .....	1,500	1,600 *	
Meetings .....	200	200	
Elections .....	100	150	
School Dinner .....	400	350 *	
Skule Nite .....	500	400 *	
Skule at-Home .....	200	400	
Freshman Reception 5T5 .....	75	70 *	
Open House .....	100	100	
Publicity .....	25	150	
Advertising & Signs .....	100	100	
Toike Oike .....	1,600	2,000	
Torontonensis .....	225	240	
Photographs .....	265	225	
Donations .....	375	375	
Delegates' Expenses .....	150	200	
Scholarships & certificates .....	120	150	
Kipling Ritual .....	350	300	
Subsidy to 5T2 .....	---	380	7,390
		6,285	\$11,820
* Denotes actual expense (approximate)		\$10,600	

## On Stores

One of the major functions of the Engineering Society is the operation of the Engineering Stores. Through the "Stores", all stationery and drafting supplies are sold to the students at reduced prices. In addition the Stores handle the sale of Skule jackets, Faculty ties, crests, hats, rings and pins, and other jewellery merchandise—all made available to the students at the Engineering Society's cost price.

The profit from the Stores is used by the Society to help finance its other functions. In this way, the students' money is actually returned to them.

Owing to increased costs and decreased enrollment this year, the mark-up was raised from 25% to 30%. It was also decided to cut out all minor expenses such as repairs and additional labour for the freshman "rush". This meant extra work for the Engineering Society members and the girls in the office. Our thanks to all those who worked so hard and helped us "over the hump".

The original goal of Stores' sales this year was \$26,000. However, with the large first year, and increased buying, sales are expected to reach \$33,000 by the end of term. As of March 1st, the grand total was \$31,694.07.

Dead stock, accumulated from 1942-48, has gradually been reduced over the past two years, and will all be written off and disposed of by the end of this term. In conjunction with this there has been a "sale" in which the students have been given an opportunity to purchase the outdated stock at extremely low prices. In this way the whole cost value of the equipment has not been lost.

On a motion of the Engineering Society Executive, the Stores have been closed from 10:30-11:45 a.m. every day to give the staff time to do the work of the various clubs and committees. This move has proven very successful.

In line with keeping prices as low as possible for the Engineering students, several changes have been investigated and designed, aimed at buying directly from manufacturers.

We cannot mention the Stores without thinking of Bev and Jerry, the very capable gals in the office. Our thanks for the tremendous job they have done in carrying out the running of the Stores' business; and thanks especially for those wonderful, smiling faces.

On looking back at "The Stores" for 1951-52, we will always remember it, not only as the sombre, "semi-efficient" supply centre for Skulemen, but also as the very cradle of Skule Spirit.

It's a tradition!

**Advertisement — if the person who stole the alcohol out of the glass jar in my cellar will return grandma's appendix, no questions will be asked.**



# TOIKE OIKE

TOIKE OIKE, TOIKE OIKE, OLLUM TE CHOLLUM TE CHAY,  
SCHOOL OF SCIENCE, SCHOOL OF SCIENCE, HURRAY, HURRAY, HURRAY

Vol. XLIII

March, 1952

No. 4

## One More Toike Oike

Brrrr! That's the way we feel too when we look at the calendar these days. Yes, that sweet month of April is just one week away — flowers, tra-la-la, birds, tweet-tweet, etc., etc., and last, but by all means most, those final exams, black coffee, and benzedrine! However, courage, Braves, it's rumoured in official sources in Communist China that only a 50% chop will be necessary to curb the hungry sadism of the Gods this year. For the first year students, we offer some timely advice — Never proceed to the examination hall without your shoes and buttons well polished — reflective thought is often very helpful when Engineering methods fail.

In case you haven't guessed, the hour grows late!

And now to more serious matters. May we take this opportunity of thanking all our faithful readers (and those who only double-crossed us a dozen or so times) for all their kind thoughts.

We've had fun preparing this quarterly for you and hope it has met with your approval. To all Skulemen, cheers!, the best of luck with the exams, and

TOIKE OIKE FOREVER!

## EDITORS OF TOIKE OIKE

Editor-in-Chief ..... H. I. Grover  
Assistant Editor ..... R. D. Christie  
Make-up Editor ..... D. Chmara  
Sports Editor ..... T. E. Broadhurst  
Business Manager . D. W. McMaster  
Photographic Editor . W. J. Assad  
Art Editor ..... J. A. Montgomery  
Legal Advisor ..... G. Hyde

### Accomplices

Dave Wood, Gene Kurchak, Jack Cooper, P. B. McKenzie, Walt Zaruby, Prof. F. G. Ewens, Eric Kofmel, Howard Greenly.

Opinions expressed are not necessarily those of the Engineering Society or its officers.

## SKULE WON HONESTLY !



PHOTO BY BILL ASSAD

Medsmen with the latest in fly-weight chariots, raced enthusiastically to the chop.

## Skule Stork Notes

Feb. 18th, 7:05 a.m. Dennis Bishop, IVth Electrical, and past Peace Council Chairman, was presented with a little bungle of joy by his wife, Mary Bishop. It was a daughter, Beverley Ann, weighing 6 lbs. 2 ozs., and lungs and other organs appeared to be serviceable. The mother is completely recovered.

Feb. 24th, 9:44 a.m. Don McMaster, IIIrd Eng. Bus., and Toike Oike Business Manager, and his wife, Anne, became proud parents of a son, Robert Paul, weighing 6 lbs. 14¼ oz. Ma, Pa, and R.P.M. are all doing fine.

Johnny (six years old): Daddy, the little girl across the street and I are going to get married.

Daddy: That's quite a step to take son. What are you going to use for money?

Johnny: Her Daddy built her a playhouse. We're going to live in that.

Daddy: What about children? Have you thought about that?

Johnny: Yes. Her and I have talked it over. If she lays any eggs we're going to step on them.



# EXCURSIONS WITHOUT ALARUMS

by Prof. W. J. McAndrew, Registrar of University College

Our activities fall into two categories—public and private. Of these the latter absorb much the greater part of our time. Our education is, therefore, inadequate if it merely prepares us to perform those tasks which ensure our livelihood. This is the fundamental assumption underlying the increasing volume of discussion and criticism of modern educational systems. Much has been said, and something accomplished, in the effort to liberalize courses in all faculties. In a society obsessed with the idea of improving techniques there is even greater need to improve technicians. In drafting courses to train students for their vocations it is equally important to foster their avocations. The guarantee of liberty implies the enjoyment of it. It is a curious commentary on modern life that increasing periods of free time have been thrust on many people handicapped to meet the challenge of leisure.

Let me say at once that I am unimpressed by the arbitrary definitions by which a cleavage is established in the field of university studies. I deplore purely technical training wherever it be found in a university. But it should be kept in mind that a liberal approach to any subject may become an excursion, without alarums, in humanism. A student in Arts may be as exclusively preoccupied with preparing himself for a job as a student in any other faculty. While courses in Arts require a high degree of specialization, even in the first year, defenders of the Faculty of Arts are on questionable ground when they criticize a similar tendency in other faculties.

Isn't it sane to assume that the cultural needs of students in all faculties are the same, and that for the greater part of their time after graduation they will have the same problems and face the same crises as citizens in the community? For who are the undergraduates? They were yesterday in the secondary schools pursuing with diligence or distaste the same courses, differing from one another only in degrees of ability, application and taste.

Who could have been unerringly sure that A would be a great engineer, B a famed physician and C an absent-minded professor? Given adequate facilities in the secondary school the able student should be qualified at the end of Grade XIII to enjoy a wide choice of careers. The student, brilliant, average, or less than average, remains the same regardless of his field of studies at the university. It need, therefore, occasion no surprise that professional faculties have sought to incorporate in their curricula such subjects as English, History and Philosophy. What might be surprising is that a student in the New General Course may avoid all three of these subjects, though it is unlikely that many will so penalize themselves.

Such studies are of paramount importance to the engineer, for on the stage of Canadian activities he has been moving steadily towards centre. Over half a century ago in Eastern Ontario, even in the rural areas, we were not unaware of the engineer. It is true that the minister, the doctor and the lawyer were the learned triumvirate. Nonetheless the steady improvement in machinery, the rural telephone, the modest splendour of the towns with their wide streets, their bridges, their water-systems suggested to us that these things derived from god-like beings who wielded great influence over the forces of nature.

Rural life, however, had its compensations. We had not yet been completely rescued from the happy simplicity of pioneering days. We were spared so much. In this recapture of Arcadian delights I realize that we were untouched by the more recent and less beneficent results of engineering achievement. The humming of the wires on a frosty night carried a suggestion of mystery. The road was a safe place. Even to the inebriate the horse was kinder than horse-power. To our ears, well acquainted with the lingering accents of our ancestry, there came no flat radio Brooklynesque. In the relative dearth of gadgets we had the annual

statement which has given place to the instalment plan.

In a changing world the engineer has increasingly impinged upon the consciousness of the community. It would now be difficult to find a settlement so remote and isolated that its citizens could be unaware of the engineer and his work. The engineer has thus, in common with other scholars, descended from the ivory tower. Man does not live by bread alone nor the engineer by his slide-rule. For the greater part of his time he is a private citizen enjoying the services and public utilities he has helped to create. Thus the private pursuits of his leisure, like those of all graduates, will reflect the quality of his education. University training for all students should include those subjects which tend to make all men kin. There will be, of course, the problem of finding time, the behests of utility clashing with the counsels of perfection.

There are many bonds which link together the student body. There is the idea that all educated men owe a service to the community, an idea not absent from the thought of the early humanists. But there is a stronger bond—the student's inevitable destiny of living with himself, and usually for a long time. Happy, then, that student whose course, while including a judicious dosage of fact and proof of memory, has provided for thought and reflection on the great thinkers and creative artists, who, as well as being the light of their ages, remain the solace and inspiration of our leisure hours.

Two old ladies were enjoying the music in the park.

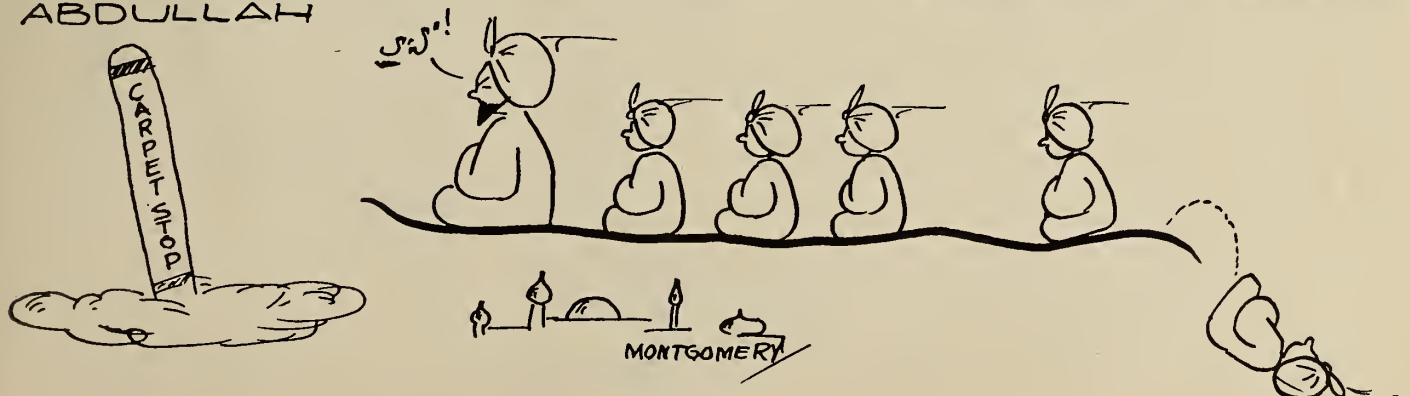
"I think this is a minuet from Mignon", said one.

"I thought it was a waltz from Faust", said the other.

The first went over to what she thought was the board announcing the numbers.

"We're both wrong", she said when she got back, "it's a Refrain from Spitting".

ABDULLAH



## Old October Ale

by

Jack Mulvenna

I have been asked to write an "article" on your Alumni Association;—I could not call it a "brief" or a "report" for then no one would read it! My chief instruction was as follows, and I quote:

"For gosh sakes, write something that the boys will read!"

Well, that is a pretty big order, especially around examination time; but fools and engineers rush in where angels fear to tread.

I had intended to start out with the word "Skulemen!" but this was greeted with various degrees of dissatisfaction and some of the following comments: "Tut-tut", "Erp!", "Harrumph" and "No comment". All highly-constructive criticism, of course, but not too encouraging. I finally discovered that the chief objection to this greeting was the spelling. It seems that the old grads always spelled it "Schoolmen". That is one thing that I have learned as a result of my association with the alumni. I have learned other things too; things that I should have known before graduation but I guess no one had time to tell me and I certainly didn't have time to go digging for anything other than examination clues.

But cheer up, lads. I have a spoon here and this stuff tastes like Old October Ale, so open your mouths—no snoring please. First of all, I have met a lot of fine Character—people in the alumni and the funny part of it is that they listen to what I have to say. Some of them even think that I am of average intelligence, which is quite a change after four years of dealing with demis.

"Sure, sure!" you say, "but what do these alumni charact—fellows do for me? And how do I fit in with them? And what is an alumnus anyway?"

Good questions these; and ones that I can answer, at least in part; for it would take a good-sized volume to answer them fully.

What is an alumnus? Here I quote from the University of Toronto Alumni Association By-Laws and Regulations:

"The membership shall consist of all persons who have received a degree or have been granted a certificate or diploma from, or who are registered or enrolled and proceeding to such a degree or diploma in, or who are former students who attended for at least one whole term the courses of any faculty or department of the University of Toronto or any of its federated or affiliated institutions".

I think that the guy who wrote that needed a course in English too, but then, who am I to say? Read it over once or twice and you can make some sense out of it. Obviously, even you fellows who are positive that you are going to flunk out after one year may still be alumni

(Continued on Page 16)

## Under the Fringe

This little tale concerns a magic carpet, also Abdullah. Abdullah, you see, owns this carpet, and although the name Abdullah means nothing to you, it means a lot to Abdullah. This gent, as it happens, is an Engineering student, and a Persian to boot. Right now he's enrolled in a Persian university and, to all intents and purposes, he's the Oriental counterpart of a good Skuleman, (be there such a thing). He even carries the Oriental edition of a slide rule; useful for beating his carpet and stirring cocktails, you realize.

Now the purpose of this whole business is to give you some idea as to how an Engineer reacts when in the possession of such a remarkable means of conveyance. I appreciate the fact that you may harbour certain doubts as to the authenticity of such a carpet, but when you consider those mechanical monstrosities, once Fords, that Skule-types are wont to drive, the idea seems much more plausible. This story, therefore, is a little bit of snoopy reporting into the day, and night, life of one Abdullah.

Abdullah's existence during school hours is just as dull as ours. He gets bogged down with lab reports and Remedial Persian until he's as foggy as we are. However, his extracurricular life is somewhat more rewarding. You see, the possibilities in owning a magic carpet are limitless. With no oil or gas bills, Abdullah can cover more territory in search of pleasure than we could ever dream of. Parking isn't much of a problem either. The carpet, outside of fringe flap, is extremely quiet, and very soft. These last two assets

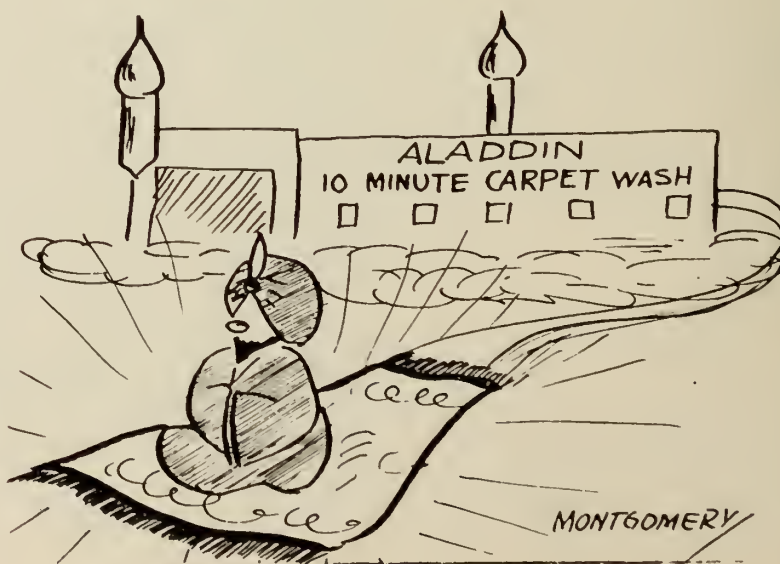
present rather an interesting state of affairs, particularly to an Engineer. Consider the late-date question. Abdullah can deliver his current dish to her very bedroom window and her old man is never the wiser. (His association with her naturally terminates at the window). Also consider the ease with which he can watch Drive-In movies, besides not having to pay until he gets within range. As a matter of fact, this business of stopping anywhere with a cooperative female on a Persian rug has possibilities too numerous to mention, barring censors.

Dangling around somewhere else in this Toike are certain on-the-spot drawings of Abdullah's existence. These pictures were smuggled out from behind the Rusty Curtain at great personal risk; unfortunately they got here. However they do represent the sort of wall-to-wall coverage we give an important article like this.

It was only a month or so ago that Abdullah got into a rather messy deal over a woman. Due to Missioners and the like we can only relate a small portion of the story, but it will serve to illustrate the ways in which a typical carpet owner operates. It seems that cigarettes in Persia are at about the same low price as they are over here. The ones across the border, though, are even cheaper. Abdullah saw in this arrangement a method of beating the regular weekly fee-hike and, not to be outdone by the Rum-running of the demmies, started a Persian airlift. Now, as in all tales of this nature, there is the invariable Lady in Black.

(Continued on Page 13)

## ABDULLAH





# Another Bridle on Honeymoon Falls

History was written in the year 1898 in the Niagara Peninsula when consumers in Hamilton, Ontario, first lit their homes with electric power generated thirty miles away at DeCew Falls, not far from the town of Niagara Falls. History was again made in 1902 when the power of the world-famed cataract itself was first harnessed for the service of man, and once more in 1922 when the first switch was thrown at the gigantic new Queenston-Chippawa Generating Station on the Niagara River near Queenston, Ontario. Now history is repeating itself as the Hydro-Electric Power Commission of Ontario once again advances upon the area with thousands of men and millions of dollars worth of equipment. When the landscape is put back in place and the dust finally allowed to settle some time in 1955, they will leave behind them Hydro's latest and proudest scion — the Sir Adam Beck-Niagara Generating Station No. 2.

Construction on the new project, one of the major power developments of the world, began over a year ago, in January 1951. The schedule calls for completion of three 100,000 horsepower units in 1954, and the addition of four more in the following year. With all seven units in operation, this plant will deliver 525,000 kilowatts of hydro-electric energy to the H.E.P.C.'s Southern Ontario system.

The project involves the excavation and removal of over 21 million tons of earth and rock for a 5½-mile tunnel and a 2½-mile surface canal which will convey water from above the cataracts to the site of the new generating station, on the lower Niagara River a short distance upstream from the Sir Adam Beck-Niagara G. S. (Generating Station) No. 1, formerly known as the Queenston-Chippawa G. S. (see accompanying map, page 10.) As in the case of the latter station, the new powerhouse is being built eight miles downstream from the intake point in order to obtain the maximum possible operating head of water.

Although the total difference in elevation between the levels of Lake Erie and Lake Ontario is about 325 feet, the drop right at the Horseshoe Falls is only 162 feet. There is a fall of over 50 feet in the rapids at the crest of the falls, and a total drop of nearly 100 feet between the foot of the cataract and the lower end of the gorge at Queenston. The earliest power developments on the river, constructed by private companies right at the falls utilized only about one half of the total drop in the river. The Toronto Power G. S. which first delivered power in 1906 is built above the crest of the falls. Water from the intake in the upper rapids drops directly down the penstocks (conduits for conveying water down to the turbines) under the building and is discharged through a tunnel to the base of the falls. The net operating head of water at full load conditions is

only 135 feet. The Ontario Power Company project, 1902, makes use of a net head of 180 feet by drawing water from the river above the rapids and carrying it downstream for a distance of 1¼ miles to the generating station at the foot of the cataract.

But the supply of usable water in the Niagara River is not inexhaustible. In order to maintain the beauty of the falls, it was agreed as early as 1909 in the Boundary Waters Treaty to limit the total allowable diversion of both Canada and the United States, Canada's share to be a maximum diversion of 36,000 cubic feet per second. The original Queenston development, begun in 1917, was planned to use the remainder of the permissible diversion. Therefore, to obtain the maximum amount of electric power from the available water, it was necessary to obtain the greatest head possible, which meant drawing in the water above the upper rapids and transporting it with little loss of elevation to the generating station which was to be as far below the falls as possible.

Fortunately the height of land between Lake Erie and Lake Ontario runs through the City of Niagara Falls with the land sloping away to the north and the south, so that the elevation of the land at the generator site a mile above Queenston proved to be approximately equal to the elevation of the land at Chippawa on the Niagara River above the upper rapids. This happy combination meant that there would be little loss of elevation in transporting the water from Chippawa to Queenston, and in fact it has afforded a possible net operating head of nearly 300 feet.

The biggest headache in planning both the old Sir Adam Beck-Niagara G. S. No. 1 and the new No. 2 was the problem of getting the water from the intake above the falls past the intervening height of land and the City of Niagara Falls to the generation site six miles below the cataract. For the first project, this was solved by going around the city. The Welland River, which flowed into the Niagara River at Chippawa above the upper rapids, was deepened and enlarged, and its flow reversed for a distance of four miles. A canal 8¾ miles in length carries the water from this point (four miles from the mouth of the Welland River) to the powerhouse at Queenston. The construction of this canal, 48 feet wide with an average depth of water of 35 feet, necessitated cutting down, at the highest point, through 143 feet of earth including 85 feet of rock.

For the present development, the water will travel under the city rather than around it. The 5½-mile tunnel, the feature of the project, is capable of conveying 20,000 cubic feet of water per second. The tunnel excavated to a rough diameter of 51 feet, will be concrete lined and finished to a final inside diameter of 45 feet.

From the gathering tube at the intake near Chippawa, the water will enter a short horizontal covered conduit, and then drop 300 feet beneath the earth's surface. Curving around the gorge, continuing north for five miles and rising 100 feet in that distance, the tunnel will emerge near the famed Niagara Whirlpool with the water-level 15 feet lower than the level at which it entered the intake structure.

Rock excavation from the tunnel will be from five shafts along the length of the tunnel, with three of the shafts within the metropolitan area of Niagara Falls, Ontario. The shafts are offset from the line of the tunnel so that they may serve in the construction of both the present tube and a second tunnel which is being considered for the future. To ensure completion of this all-important job on schedule, the work was divided into four contract sections, with not more than two sections awarded to one tenderer. The first and second sections were let to Rayner-Atlas Ltd., the only Canadian group to tender, with the third and fourth being awarded to a group of companies associated with B. Perini & Sons Inc., Walsh Construction Company, and Canadian-American Contractors. Recently the plans for the upper portion of the tunnel were altered and the contract on a fifth section was let, also to the Perini-Walsh group.

All construction work other than the tunnel is being carried directly by the Construction Department of the H.E.P.C. This includes the intake structure near Chippawa, an open cut canal 2½ miles long from the tunnel exit to the generation site, the forebay, screenhouse, and powerhouse.

The open cut canal will be a solid rock cut, not requiring concreting, with the exception of a 2,200-foot stretch commencing at the tunnel outlet. In this section—the gorge of an ancient river which flowed north-west from the Whirlpool—a glacier at some remote time filled the gorge with loose sand and rock. A trapezoidal concrete trough will be constructed to carry the water through this mass of glacial debris.

Most of the machinery in use on the canal has been brought down from the recently-completed northern and eastern developments at Des Joachims, Tunnel and Pine Portage. This includes a wide variety of earth-digging and transporting equipment for skimming off the top layer of earth, batteries of automatic air-operated drills employed in blasting operations, and a huge fleet of gigantic 20-ton Diesel trucks such as were on display at last year's Canadian National Exhibition.

Many of the expected total of five thousand workers for the project have also been transferred from these earlier projects. To house the men employed on the job, three camps have been established with

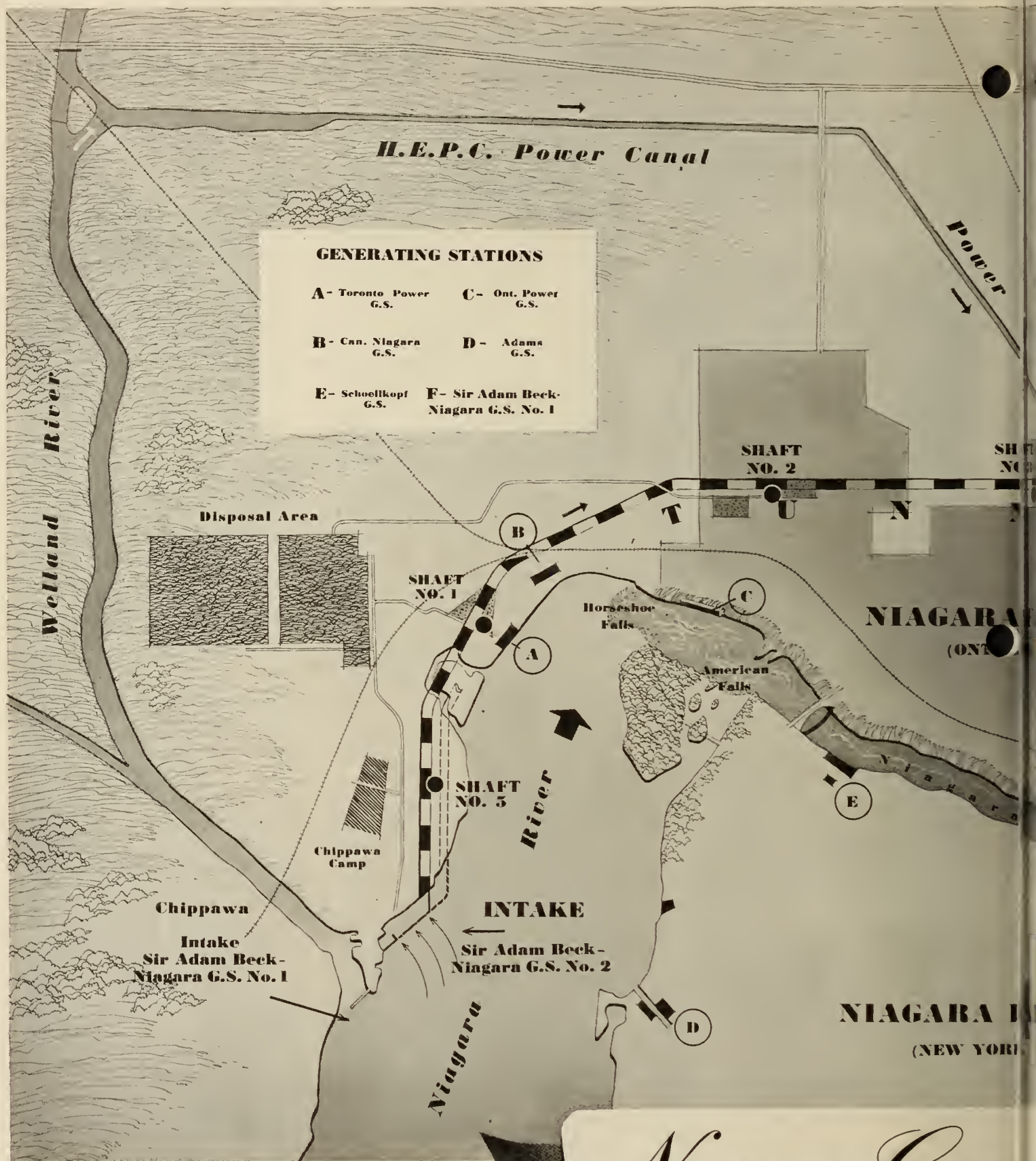
(Continued on Page 12)



**H.E.P.C. Power Canal**

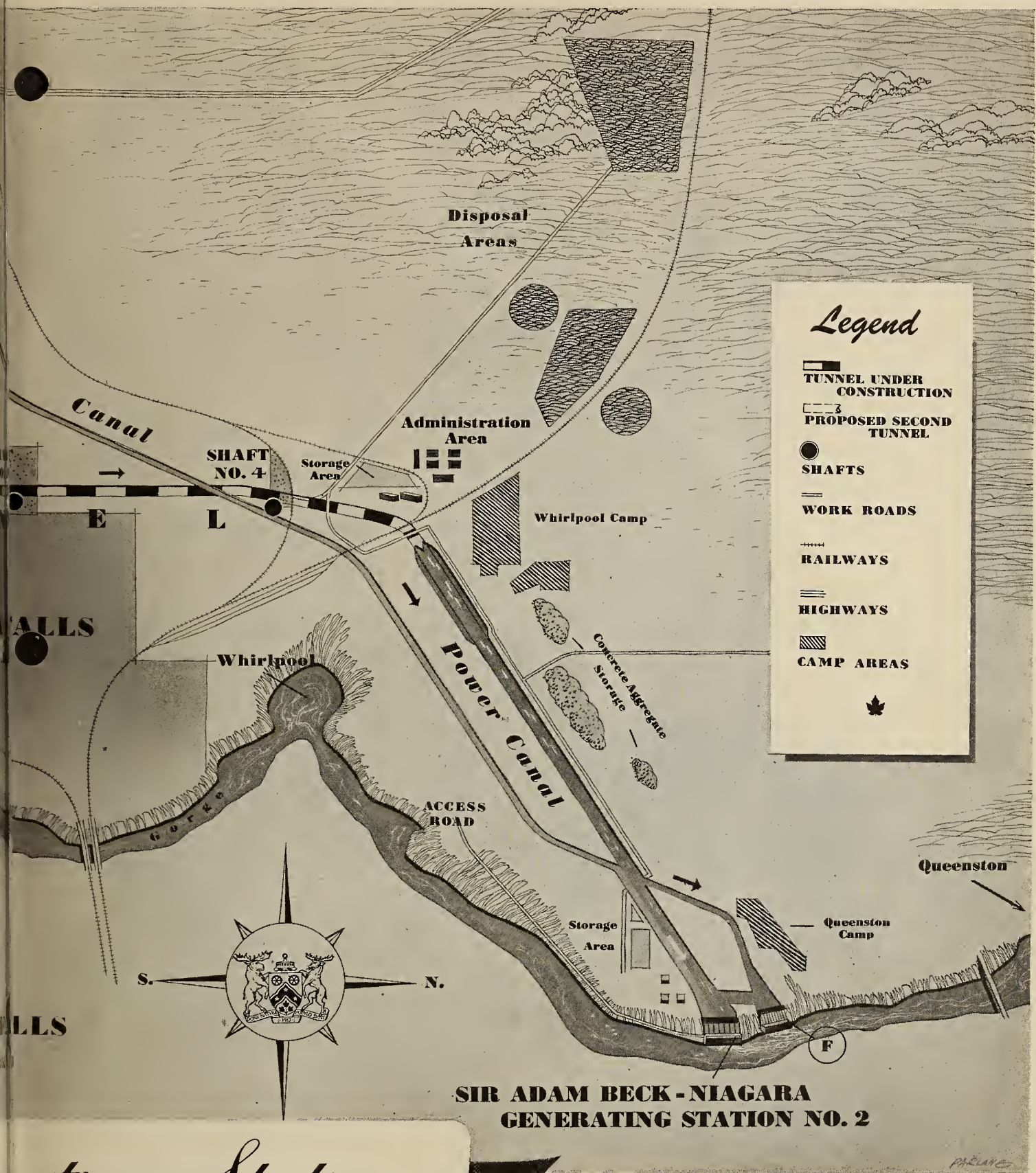
**GENERATING STATIONS**

- |                               |   |
|-------------------------------|---|
| <b>A</b> - Toronto Power G.S. | <b>C</b> - Ont. Power G.S.                  |
| <b>B</b> - Can. Niagara G.S.  | <b>D</b> - Adams G.S.                       |
| <b>E</b> - Schoellkopf G.S.   | <b>F</b> - Sir Adam Beck-Niagara G.S. No. 1 |



*Niagara Generation*





*Generating Stations*



# Hydro Story

(Continued from Page 9)

a maximum capacity of four thousand men, complete even to fire halls and a thirty-bed hospital. Several of the fourth year classes who have visited the project on field trips will vouch for the quality of the food served. Twenty houses erected to the south of the city for the use of engineers and other key personnel, were the first in the area to be serviced with sixty-cycle power.

To provide access to the powerhouse site, at the base of the cliff, work was started from two directions. An access road has been built down the face of the cliff from a spot about 1½ miles above the site, while at the same time, by blasting and pushing the debris over the edge into the river, a group of bulldozers worked their way straight down the side of the gorge, ending with a wide platform at the base. Eventually it will be necessary to excavate rock to approximately 38 feet below water level, in order to give sufficient space beneath the turbines for the spent water to discharge into the river. This work will be carried on behind a temporary cofferdam.

The concrete to be used for the entire project will be made on the job from rock excavated from the canal. The concrete required for the whole development including tunnel equals that used for the main dams of Des Joachims and Pine Portage combined. By the Commission's own estimates, this concrete would build a direct sidewalk from Quebec to Vancouver. Steel used on the project would build five Rainbow Bridges; lumber to be used would fill a train of box-cars from Queenston to Hamilton. The earth and rock to be removed would fill 1,130,000 fifteen-ton Diesel dump trucks, or enough trucks to parallel the Quebec-Vancouver sidewalk, bumper to bumper, in two lines.

Waste rock will be dumped in four main disposal areas covering approximately 700 acres. Upon completion of the project they will be graded and landscaped. Heavy-duty work roads have been constructed from the canal, the intake and each shaft to the disposal areas.

This new development on the Niagara River was made possible by the signing of a new treaty between Canada and the United States in 1950. During World War II, the Hydro, in co-operation with U.S. power authorities, constructed a submerged wier above the falls which helped maintain the beauty of the falls while allowing a greater diversion. More recently studies have demonstrated that to maintain the characteristic green colour at the crest of the Horseshoe Falls, a minimum flow of 100,000 cubic feet of water per second is required. This resulted in the new treaty which specifies a minimum flow of 100,000 cfs. in daylight hours in the tourist season, and 50,000 cfs., at all other times, with each country entitled to divert its share of the remainder of the flow. Since the average discharge of the river is 210,000

cfs., the new treaty meant an immediate increase in the average allowable diversion. Work on the new Sir Adam Beck-Niagara G.S. No. 1, already planned, was begun at once.

A model of the upper Niagara River was built by the Commission at the A. W. Manby Service Centre in Islington, to study the best location for the intake of the new project, and to experiment with remedial (naughty word!) works in the river to obtain a more even flow across the crest of the falls.

Other research work for the project has been conducted in the SPS River Flow Laboratory in the Mechanical Building. The work there has included experimentation with the intake structure, the tunnel exit, and the area where the old and the new canals intersect, including the two forebays. Models for all these were in use during the Freshman Tour last fall.

As can be seen by the map, the tunnel turns sharply just before it comes to the surface near the Whirlpool. Models for this portion of the work were constructed from tubes which, starting at floor level, turn horizontally and upward, spilling onto a model of the trapezoidal segment of the canal built at table level. Different combinations of turns and twists in the tubes, representing the tunnels, were tested in conjunction with various designs for the tunnel exit for maximum efficiency of the combinations. The models of the canal and tunnel exits were formed by laying two inches of concrete over a sand base.

Experimentation with the design of the forebays and the canal intersection produced the unusual plan shown. The new canal will not pass directly through the old, but is offset somewhat to the south as it crosses. The water flowing down the old canal (width 48 feet), travelling at nearly 15 feet per second, turns into the new canal (width 200 feet). The speed of the second canal, on entering the intersection, of 7 feet per second is increased to 9 feet per second by the additional water, while some water from the new canal turns into the original conduit at 6 feet per second, thereby greatly decreasing the turbulence where the water turns into the forebay. The two forebays are also to be joined by an inter-connecting canal, through which water will flow from the new forebay to the original, to compensate for the decreased flow in the old canal.

The intake, just downstream from the intake for Sir Adam Beck-Niagara G.S. No. 1 at Chippawa, will be a 500-foot long "gathering tube" jutting out at a slight angle from the existing river bank. A row of inlet ports, stretching along the river face of the intake, are so designed that the water will enter uniformly. These ports are located at a sufficient depth below the river surface to prevent floating ice from entering or interfering with water flow. The research work for the canal

intersection and the tunnel exit was done by the Hydro in the River Flow Laboratory.

When the intake structure is completed, the area between the gathering tube and the shore will be filled and planted with trees. Only a low parapet wall along the river's edge and a control structure, with a 58-foot steel gate which can be lowered into the gathering tube to seal it off from the tunnel, will be visible above the surface.

Finally, when the whole project is complete, the disposal dumps graded and landscaped, the workmen's camps and temporary administration buildings and workshops removed and the landscape restored to order, the reclaimed land behind the intake structure and the access road down through the Niagara Glen will be given to the administration of the Niagara Parks Commission to form part of their 35-mile parkway along the Niagara.

## New Athletic Assoc.

Well the end of another year has rolled around, and it is a good time for Skule to survey its athletic activities for the year. It must be said that the hard working Athletic Association under Bob Beattie did a terrific job in keeping interest up in Skule sports, and in organizing all the many teams and tournaments.

A brief word with Kay Boyd in the Intramural Athletic Office in Hart House will show the kind of job that has been done when she tells you that Skule's participation in intramural sports has risen about 10% over last year. This, accompanied by the decrease in enrollment at S.P.S., is even more surprising and gratifying.

With these few words of congratulation then, let us switch our gaze from the past, and have a look at a few of the fellows who will be taking over the athletic reins for Skule next year.

Succeeding Bob Beattie as President will be Howard Greenly. It will be Howie's first stint on the Athletic Association, but he brings with him a lot of experience gained in Intercollegiate Boxing circles. In his first year he played Junior football, and started boxing. In 1951 and 1952, Howie was a member of the Varsity Blues Boxing team, and he won his weight (175 lbs.) in 1951 along with the Zeiler Trophy awarded to the most improved boxer on the Senior Intercollegiate Boxing Team.

George Shipley is the new Vice-President. George served on the Athletic Association in his first year as 5T4's representative. Water polo, and Junior football have been George's strong points so far.

Occupying the post of secretary-treasurer will be John Prendergast. This will be John's third year as a member of  
(Continued on Page 13)



## Skuleboy Boners

It seems that students in Engineering are just as apt to make boners as any other schoolboys. F. G. Ewens, Assistant Professor of Mechanical Engineering, has noticed this fact and has made a hobby of culling these unintentional bits of humour from second year Elementary Heat Engines papers. The following is a list of the more interesting "Skuleboy Boners," and we are indebted to Professor Ewens for permitting us to present them to our readers.

Watt used snuffing boxes to seal his engines.

Watt used greece for lubrication.

Watt used a condenser to condense the steam before it entered the cylinder, thus raising the temperature of his engine.

Watt's sun and planet gear made a revolutionary motion.

Newcomen used a snifter to force out old steam.

Snuff box is used for expansion in pipes.

Corliss valve is too long for I.C. engines, so it is used in steam engines because it has a spherical seat and therefore can reseal itself when the seat becomes warm.

Circular pipes are the best all round ones.

Watt found 1 H.P. equals 33,000 ft. lbs. per hour.

Watt found 1 H.P. equals 33,000 ft. lbs. per second.

Watt used a bicycle pump to maintain a high vacuum in his condenser.

Watt used a separate compressor to compress steam as it left the cylinder.

Watt invented a swinging governor which had lead balls.

Watt connected several horses to the pulley of his engine by a long rope, and by pitting his engine against the horses obtained a rating in horsepower.

Watt invented the squash plate engine.

Watt's governor moved two metal balls up and down to keep the boiler temperature constant.

Watt used a condenser to condense steam before it entered the cylinder thus raising engine temperature.

McKnight and McCollum are sleeve valves, I hope.

Liquid fuel has no refuge.

Bituminous coal contains a lot of waist.

In continuous combustion, fuel oil may be used, but during winter sometimes oil is hard to get which causes much despair to the home owner and also he has no ashes to put on his sidewalk.

To reduce heat loss, line pipes on the outside.

For high efficiency, coal should have low carbon content to prevent soot.

Compression ratios in auto engines now vary from 75 to 500 to 1.

The Corliss valve is an osculating valve.

An engine should not be overloaded with load.

In addition to the above list of gems, we have a list of commonly misspelled

words also taken from the same papers. Permanency, transmission, prepostrus, ocellatory, insullation, obsticles, intricities, attatched, emmissivity, susceptile, pressent, pheasible, strickly, rappid, stoakers, efficiency, temperarilly, oxegen, nozzeles, spindal, ballance, varyies, systum, vains, illimminate, periphery, dammage, densily, modle, chimenies, safeteyness, vacumn, adjitate, lubriquation, crutial, varyous, symetrecal, equipted, hense, sourse, vehical, spehers, suns raze.

### Under the Fringe

(Continued from Page 8)

(rather reddish in this case, communist you know). Poor old Abdullah, out of biological curiosity, became rather involved with this particular dame to the extent that she was getting most of his profits. Unfortunately this is the spot in the story where the R.C.M.P. requires strict censorship, but there is a rumour of a certain retreat to the backwoods or something, followed by warm Persian nights, which gives one the general idea of the outcome.

Without getting morbid, I think that the foregoing will give some idea of the life old Abdullah leads. There are many more adventures which could be told, but I believe that they can wait for a subsequent issue, (until things cool off a bit).

## New Athletic Assoc.

(Continued from Page 9)

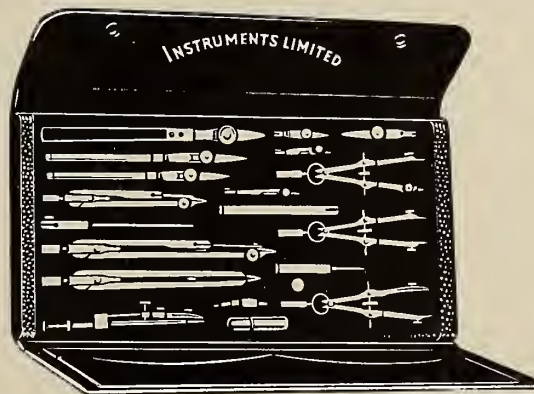
the Athletic Association. In his first year he played football and hockey for Junior Skule, as well as representing his year on the Athletic Association. In his second year, John was elected Vice-President of the Athletic Association, and played for the Intermediate Football Blues. He also played water polo and basketball for Skule. All these activities combined to upset John's apple cart as far as examinations were concerned, and he had to repeat his year. This year John has played football for Senior Skule, and Basketball.

Representing fourth year on the Association will be John Raftis. Hockey has been John's main interest while at SPS. He played for the intermediate Hockey Blues in 1950, coached Junior Skule in 1951, and played for senior Skule in 1952.

Paul Di Novo is the new third year representative. Paul played Senior Football, and water polo for Skule this year.

And so the way things look, Skule should have a top notch bunch of fellows running the athletic activities in Skule next year and let us wish them the best of luck in their quest for the T. A. Reed Trophy in 1952-53.

So, with a flap of the broad loom and the buzz of a vacuum cleaner, I'll bid fond farewell to you till we next meet, under the fringe.  
Max.



SOLE CANADIAN REPRESENTATIVES FOR THE  
FAMOUS DIETZGEN DRAWING INSTRUMENTS.

We carry a full line of  
Draughting and Engineering Supplies

**INSTRUMENTS (1951) LTD.**

14 ADELAIDE ST. W.

TORONTO

# SPORT OIKE

Recently the Engineering Society has been seeking to increase its portion of the student fees in order to make ends meet financially.

Since it is the Athletic Association with which we are concerned here, it might be a good idea to examine a few of its requests, and the grounds for them. It must be pointed out that the raise has already received student approval in a vote taken on Tuesday March 4th, but since only a small number turned out to vote, a general discussion of the problem will help clarify the situation. The recommended increase has also to be approved by the Faculty Council before it can be enforced.

The Athletic Association maintains that equipment costs have risen considerably in the last few years. Apparently increases over the last year only ranged from 2% for hockey sticks, to 22% for shoulder pads.

The sharp increase in prices was not felt so keenly until this year for a number of reasons. First, revenue was high due to the large enrollment, while participation was approximately the same due to the limited facilities. Second, a lot of new equipment was purchased during the immediate post war period which is now due for replacement.

However, with the passage of four post war years enrollment has decreased, but sports participation has increased, 8% in 1950-51, and about 10% in 1951-52. Thus the Athletic Association has been faced with the problem of supplying increasing amounts of equipment with less and less money coming in.

The whole question then boils down to that of equipment. A brief prepared for presentation to the Faculty Council points out that the cost of running every Skule team in every Interfaculty sport is approximately \$3,500. The cost of having "S" awards, and the Athletic Dance, along with other miscellaneous items, amounts to \$1,250. This gives an operating grand total of \$4,750. This year's enrollment was 1,619, and seems to show every intention of staying around the 1,600 mark.

A simple division shows a contribution of three dollars per student to be necessary, instead of the two dollars now asked. A comparison with other colleges will show that none of the athletic fees are under four dollars. So it would seem that the Athletic Association has a pretty strong case, and let us hope it goes through even though it is our money.

\* \* \* \*

Well the day of reckoning has come I suppose, and it is time to glance at the Reed Trophy standings — one long last look.

The sight is not one for the sore eyes of a Skuleman as to date we are lodged in fourth spot behind U.C., Trinity and Meds. However basketball is not included in the point standing as yet, and both Junior and Senior Skule are in the semi-finals, which augers well for a championship team.

SPS took two championships this term. The first was a walk-over by Eric Kofmel and Company in Indoor Track, and the second was in Boxing. Skule also managed to reach the finals in swimming and wrestling.

However, even though Skule's successes were not too numerous this year, it was not for want of trying. About 10% more students turned out for interfaculty competition despite the decrease in enrollment, and, if this high level of participation can be continued next year, a few more championships should be rolling into the Engineering future.

## Athletes Dance Receive Awards

This year the Athletic Association repeated its idea of having the presentation of athletic awards held at a special "S" Dance to which everybody was invited.

The locale was switched from the Embassy to the Savarin Hotel this year, and was held last March 5th. It was thought it would be a good idea to hold the presentation at the beginning of the evening, but here the Athletic Association made a slight boob in that it ignored human nature, and its adversity to being on time. However, the awards were finally made.

The main award of the evening was the Special Bronze "S" presented to Alec Lawson for being voted the man who gave outstanding service to SPS and the University of Toronto, in the realm of athletics. Throughout Alec's sojourn the lad from the Fruit Belt has been making a name for himself in football circles. In his first year at Ajax in 1946-47, he was a member of the famous Ajax team, who were O.R.F.U. eastern champions that year. In 1948-49 he played at end on the Varsity Blues, the Yates Trophy winners. Unfortunately he missed out in the exams that year, but came back and coached Junior Skule in 1950. This year has been the most memorable in his five years at Skule. He was the quarterback of the champion Blues Football team, and was awarded the Johnny Copp Memorial Trophy as the most outstanding player on the team. Congratulations Alec, and the best of luck in your football future.

The Gilley Trophy awarded to the man who is voted the most outstanding athlete in his freshman year was awarded to Bob Kimoff. Bob played intermediate football and basketball for Varsity, and was also a member of the intercollegiate swimming team.

The Phene Memorial Trophy, which was presented by the family of George William Phene who died of injuries sustained in the Mulock Cup game in 1936, was awarded to Don Kerr.

The Barbour Memorial Trophy, presented to the most outstanding player on the Junior Football team, was awarded to Bill Horton. This trophy was first presented at Ajax by the class of '17 for the championship in inter-residence basketball. At the close of Ajax the class of '17 agreed to have the Trophy presented to the most outstanding member of the junior football team.

The Class of 2T1 Trophy was first awarded at Ajax to the champion inter-residence hockey team. With the close of Ajax the Class of 2T1 decided to have the Trophy presented to the third year Engineering student judged to be outstanding in sports participation, leadership, and scholastic ability. The award this year went to W. O. Johnson.

A hot-spell story that we like is about the girl who went swimming in the raw in a secluded millpond. Along came a little boy who began to amuse himself tying knots in her clothes. She floundered around, found an old washtub, held it

up in front of herself and marched toward the little boy, saying: "You little brat, do you know what I'm thinking?"

"Sure," said the little brat, "you think that tub has a bottom in it".



## Basketball

The Senior Skule Basketball squad made an auspicious but hardly enviable start this season by losing its first three games. However, just when things looked darkest, Sr. S.P.S. was rejuvenated by the addition of Ken Brown of last year's Varsity Intermediates, and Alec (Dad) Lawson who was persuaded to come out of retirement and help the cause with his sparkling rebound work.

At this point Sr. Skule began to roll, and, by playing the brand of ball of which it is capable, produced, by time of going to press, a five-game winning streak. Its greatest claim to fame is the thrilling last-minute win over St. Mike's A, an otherwise unbeaten team. The most notable point-getters for the squad have been Austen, Tamowski, Brown and Pierce. However, it has been the relentless spirit and team play which has carried Sr. Skule to the semi-finals and which can lead them on to possible victory in the finals against the same St. Michael's team.

The Junior Skule basketball team did fairly well this year, going through the season with only three defeats. One of these was to the Dents A team which copped first spot in the league. The Engineers tied with Junior U.C. for second place.

The Skulemen went into the playoffs in fine style and knocked out Junior UC, but they came up against that team from St. Mikes which seems to specialize in knocking SPS basketball teams out of the playoffs, and lost out in the semi-finals.

Kelly, Day, McNinn, and Bruce all turned in consistently good performances, and the team should provide a strong nucleus for next year's Senior Skule team.

The VI won all its games by at least thirty points, and batted one thousand throughout the entire six game schedule.

## Boxing

Here is one department where the Skule Boys made an outstanding showing this year. Last December the pugilists won the Novice Junior Boxing Tournament. Ten Skulemen entered in six weight classes; we had six champions.

Barrie Blanshard battled his way to a win over Ted Makamichi, also of SPS in the 130 lbs. class. Ron Kissick won the 140 lb. class. Mike Miller won a split decision over Vic Prendergast (SPS) in the 147 lb. class. Larry Wade beat Pete Fisher in the 165 lb. class. In 175 lb., Mike Acton won over Jim Frame from UC, and finally in the Heavyweight Division, Jim Stoyan, and Roy Stevenson, both Skulemen, won their respective semi-final bouts, and thus met in the final. Roy was declared the champion.

We had no entries in the 135 and 155 lb. classes. These boys gave Skule six champs out of a possible eight. Nice going, fellows!



The forward line boasted four men that were over six feet five inches tall, and Patterson, the little man of the team, also starred.

However the VI's came to grief in the playoffs, when they ran up against Pre-Meds and lost by a 39-34 count. The high scorers during the season were Ottaway with 79, Turner with 39, and Patterson with 26. Wally Angus was manager of the team.

The VII's had a similar record, winning all six games, in group X. They won their first playoff game against Law, but fell by the wayside in the second round when they took on the St. Mikes A team.

Their accomplishment deserves even more praise when it is considered that the squad was only a pick-up team.

Carl Bumgardener, and Bob Neff led the scorers by a slight margin, but all members scored almost the same number of points.

Now for the Senior meet. It was held in the middle of January. Many of our boxers had just finished exams, and had not recovered from the holidays either, and so were not in too good shape. However a few faithfuls worked out and won the Senior Interfaculty Boxing Tournament, along with the Davidson Trophy. These boys were Mike Acton, George Blackburn, Larry Wade, Bob Eve, and Vic Prendergast. Vic became senior champ in the 147 lb. class, as did Larry Wade in the 165 lb. class. Both Larry and Vic are freshmen and have made a good showing for themselves in the ring.

Injuries hampered a couple of Skulemen from fighting on the intercollegiate team. Roy Stevenson injured his nose, and Norm Green, southpaw veteran of three Senior Intercollegiate teams, broke his hand a week before the tournament. However, Skule had three men on the Senior Intercollegiate team in the form of Roberto Couceiro, Pete Petcoff, and Howie Greenly.

## Indoor Track

Skule has another team of champs! In the past two years the SPS indoor track team has been edged out by a few points. This year, however, the Skulemen walked away from all the opposition by taking the lead in points on the very first day of competition. Two months later they had tallied 86¾ points. Victoria, second, had only 37 points. It is interesting to note that Skule never lost the lead, and was never seriously challenged throughout the meet. On the contrary, if you will pardon the play of words, they ran away from everybody with a total score greater than that of the next three teams combined.

Of the records that fell this year, the Skulemen felled more than their share. Deuchars added three feet and some few odd inches to the shot put record, and Kofmel clipped a few tenths of a second off both the 300, and 440 yard dashes. The powerhouse relay team of Husband, Fee, Yeigh, and Kofmel made two unofficial records in the relay events.

The point earners for SPS in the long distances were Webster and Greenly. Skule did particularly well in the sprints and middle distances with Kofmel, Husband, Fee, and Yeigh getting the honours. The field events were taken by Deuchars, Smith, Sutherland and Freeman. Skule entries included Ojala, McLeod, Bernhardt, Miklas, and Murchis.

As those black robed artsmen to the north would put it, "I say, well done old chaps."

## Sr. S.P.S. Hockey

Senior Skule finished the hockey schedule tied for second spot in group I with St. Mike's A's. The team went through the regular schedule with four wins, and three losses. UC and Meds were twice defeated, while the Skulemen dropped two to Senior Vic, and one to St. Mikes. The second game with St. Mikes was cancelled due to complications in the playoff schedule.

In the first round of the playoffs, Forestry was defeated 7-4 in a fast, high-scoring game. Unable to reach their usual form for the second game, the boys dropped the contest to Dents by a score of 5-1. This retired the team for another year.

Throughout the year the big line for Skule was Morrish, Wilson, and Smith, which accounted for sixteen of the thirty goals scored by the team this winter. Veteran "Kake" Wilson led the pack with seven goals, closely followed by George Smith with six. Other major marksmen were Morrish with three, Beattie with four, and Sullivan with two. Getting one goal to their credit were Crann, Martin, Hookings, Burley, Raftis, Cooper, Petcoff, and Yeo.

Although the boys were were not able to bring home the hardware, they put up

(Continued on Page 17)

## Alumni

(Continued from Page 8)

members. So you can see that this is no snob organization; in fact, I have it on good authority that they even let professors and demis in. Of course, we don't pay much attention to them, so don't be prejudiced on that account.

The U of T alumni Association is the parent body of the various faculty associations, not the least of which is the Engineering Alumni Association. This is the one with which we Schoolmen are chiefly concerned. I hasten to point out that membership in any faculty organization automatically provides membership in the parent organization.

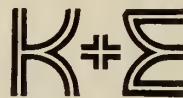
What does the Alumni do for you? As an undergraduate, your welfare is of great concern to the Association. Such matters as your curriculum, teaching methods, the changing requirements of industry, teaching facilities and equipment and various other problems come under the surveillance of this organization. We admit that our methods may be slow and subtle but they are effective. The Engineering Education Committee Fund is an example of what we are doing for you. This fund came into being at the General Meeting of the 14th Triennial Reunion of the Engineering Alumni Association in October, 1951. All "School" graduates are invited to contribute to this fund which is intended to provide additional scholarships on the basis of academic merit; loans and bursaries on the basis of financial need and specialized equipment for the advancement of teaching methods.

At the risk of bringing up a controversial subject, I might point out that the weakness in English at "School" has been under study by the Association for some time. Our University President has recently given impetus to our aims in this direction through the medium of our city newspapers.

How may you fit in with the Alumni? As an undergrad, you may serve us best by upholding the reputation and traditions of "School". This means plenty of hard work mixed with generous portions of play. Get into your class organizations, Skule Nite, sports and other activities. This is all a part of your education. It engenders school spirit and, incidentally, helps you to avoid ulcers.

In your graduating year, we would ask you to cooperate fully with your permanent executive by digging into that beaten old wallet and paying your first year's dues. Be doubly sure that both the Association and your class representative have your name and address. If you change your address in the future, let them know immediately. An up-to-date mailing list is one of our chief desires.

Now that I have finished, I can think of many items that I neglected to mention. In particular, the activities of the Junior Council are of special interest to



DRAFTING, REPRODUCTION, SURVEYING  
EQUIPMENT and MATERIALS

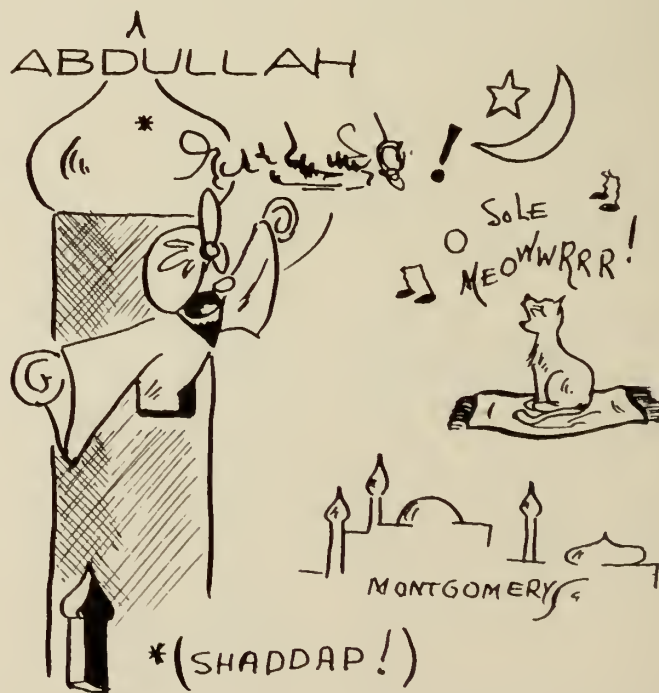
•  
SLIDE RULES

•  
MEASURING TAPES

# KEUFFEL & ESSER OF CANADA LTD.

679 ST. JAMES ST., W.

MONTREAL, P.Q.



new graduates. But you may learn all of these things by taking an active interest in the Engineering Alumni Association upon graduation.

*Footnote:* The contents of this article are not necessarily sanctioned by the Engineering Alumni Association nor by

"Toike Oike", but represent an attempt by the author to explain some of the aims and purposes of the Association. In order to forestall criticism, I might add that this conglomeration is not to be taken as an example of good English, but may possibly serve as evidence to the contrary.



## Debating

The S.P.S. Debating club pretty well ran the gamut this term, as it sent debaters as far west as London to debate with Brescia Hall, as far north as Victoria College and as far east as St. Michael's College, in quest of glory.

Heinz Feldberg and Wally Emon were sent down to London to try to keep the Brescia Hall girls happy. Apparently they did so, and must have been well rewarded for their troubles since they brought back some of their expense money. They debated on "Resolved that, On the North American continent, the small college offers better opportunities for training in leadership than the large college."

John Cocking and Heinz Feldberg held forth at St. Michael's, aided and abetted by Wally Emon in the Speaker's Chair of the St. Michael's Senate Club. Incidentally, Wally is also a member of the Inter-collegiate Debating team.

Victoria College finally lost to S.P.S. as the team of Morley Marks and John Smale won a close decision up at Vic in which the Speaker had to cast the deciding vote. They debated on "Resolved that, The University of Toronto should not abolish the Colleges and consolidate itself into Faculties."

Inside S.P.S., the club recently held a debate on "Resolved that, The Engineering Society places too much stress on 'Society' and not enough on 'Engineering'." Here Geoff Hyde and Norm Kissick were unsuccessful against Morley Marks and John Smale. Doug Sherk was guest speaker.

The Segsworth trophy Finalists this year were Wally Emon and Laurie Samuels from IV year, and Morley Marks and John Smale from II year. The debate was on "Resolved that, In the English speaking countries, the fight for the liberties of the individual is being lost."

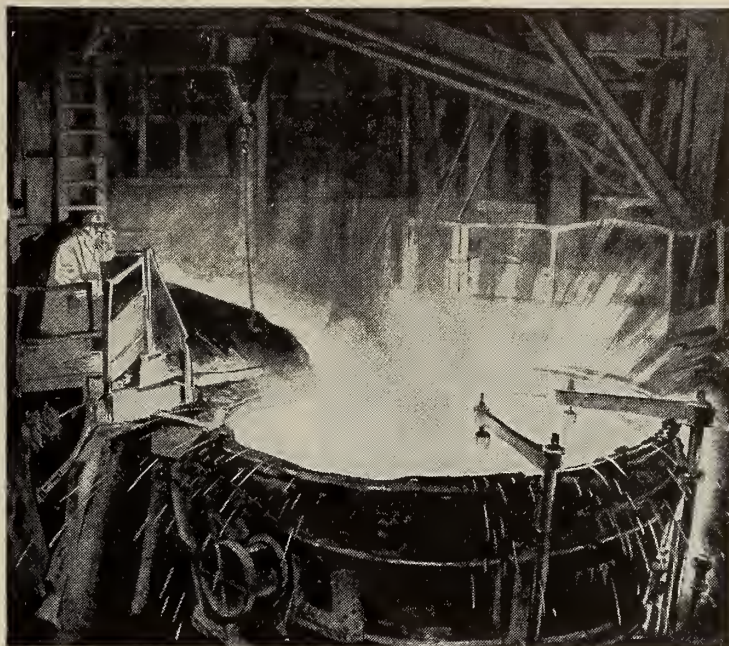
## Hockey

*(Continued from Page 15)*

a good fight, and deserve a lot of credit. The majority of the boys were having their first try on the senior team. Many of the stars hope to graduate this year, but ten of the players will be back next year to form the nucleus of a good team.

With many hopefuls coming up from the junior team, Skule will have little trouble for the next year or two anyway. Good luck to the future champions.

Senior SPS line-up — Goal: R. M. Fleming. Defence: R. S. Hookings, D. L. Crann, W. E. Burley, R. A. Brownlee, G. K. Martin, C. P. R. Greenan. Forwards: J. K. Wilson, G. T. Smith, J. H. Morrish, R. A. Beattie, J. N. Raftis, W. J. Cooper, J. M. Roberts, J. Sullivan, P. Petcoff, G. O. Hayman, W. H. Yeo. Manager: W. S. Zaruby.



## out of this crucible . . . a stronger Canada

Challenging problems of production face Canada today. Prudence and the needs of progress demand that Canada must be strong tomorrow. And so much depends on steel!

That is why Stelco is investing \$50,000,000 in a night-and-day expansion program . . . designed to give Canada still more steel in the months and years to come.

The program is in action now that will pour annually a 650,000-ton river of additional new steel to sweep Canadian industry ahead to even higher production goals.

All this future-minded work is going ahead without interruption of Stelco's current steel output, which is at an all-time-record "high" . . . and growing fast . . . to make a stronger Canada.



EXECUTIVE OFFICES: HAMILTON—MONTREAL

SALES OFFICES: HALIFAX, SAINT JOHN, MONTREAL, OTTAWA, TORONTO, HAMILTON, LONDON, WINDSOR, WINNIPEG, VANCOUVER  
J. C. PRATT & CO. LIMITED, ST. JOHN'S, NEWFOUNDLAND



**YOUR  
DIRECTORY  
FOR**

**REPRODUCTION  
SERVICES**

**BLUE PRINT PAPER**

**OZALID DIRECT LINE**

**PEERLESS  
PHOTO COPY**

**DRAWING  
MATERIALS**

**SURVEYING  
INSTRUMENTS**

**STEEL TAPES**

**MICROSCOPES**

**BINOCULARS**

**ARTISTS' MATERIALS**

# THE HUGHES OWENS COMPANY LIMITED

**VANCOUVER**  
569 Richards Street

**EDMONTON**  
McLeod Building

**WINNIPEG**  
103 Princess Street

**TORONTO**  
36 Adelaide Street West

**OTTAWA**  
527 Sussex Street West

**MONTREAL**  
1440 McGill College Avenue

**HALIFAX**  
169 Hollis Street

# AROUND THE WORLD WITH YUBA DREDGES

For over 40 years . . . a life-time of experience . . . YUBA has built dredges for the recovery of gold, tin, platinum, precious stones, and aggregate handling. Draw on this great fund of experience for help with your dredge problems — consult YUBA NOW.



**California** — YUBA Dredge No. 98, with wood hull, 9 cu. ft. buckets, 30' digging depth, recovering gold for La Grange Gold Dredging Co.



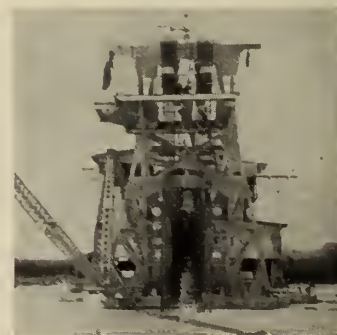
**Korea** — YUBA Dredge No. 79, steel hull, 10 cu. ft. buckets, 33' digging depth, gold mining.



**Yukon** — Digging gold near Dawson for Yukon Consolidated Gold Corp. YUBA dredge with wood hull; designed for Arctic conditions, 7 cu. ft. buckets, 25' digging depth.



**Montana** — Perry & Schroeder Mining Co.'s dredge, built with pontoon-type hull, 6 cu. ft. buckets, and 38' digging depth for mining gold, garnets and sapphires; now being used for back-filling cofferdams at Canyon Ferry Dam site and for excavating aggregate



**Malaya** — Kampar Malaya No. 1, with steel hull and 10 cu. ft. buckets, digging tin at depths to 75 ft. below water.



**YUBA MANUFACTURING CO.**

Room # 728, 351 California St., San Francisco 4, California, U. S. A.

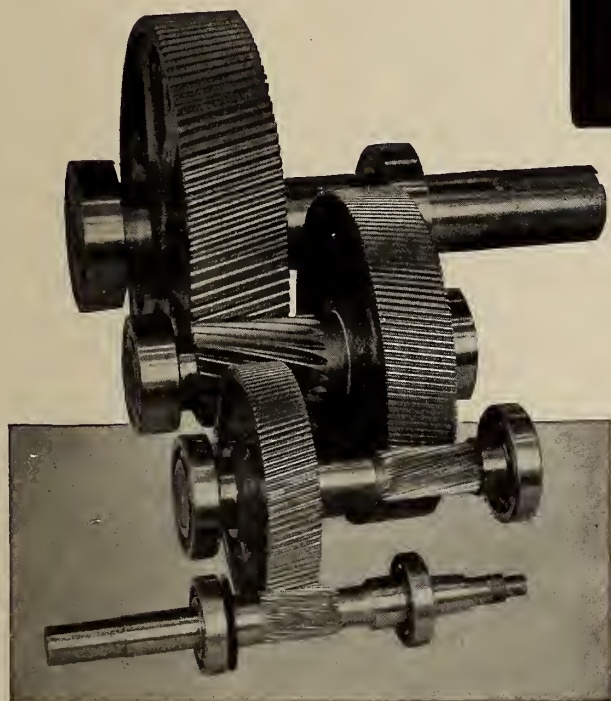
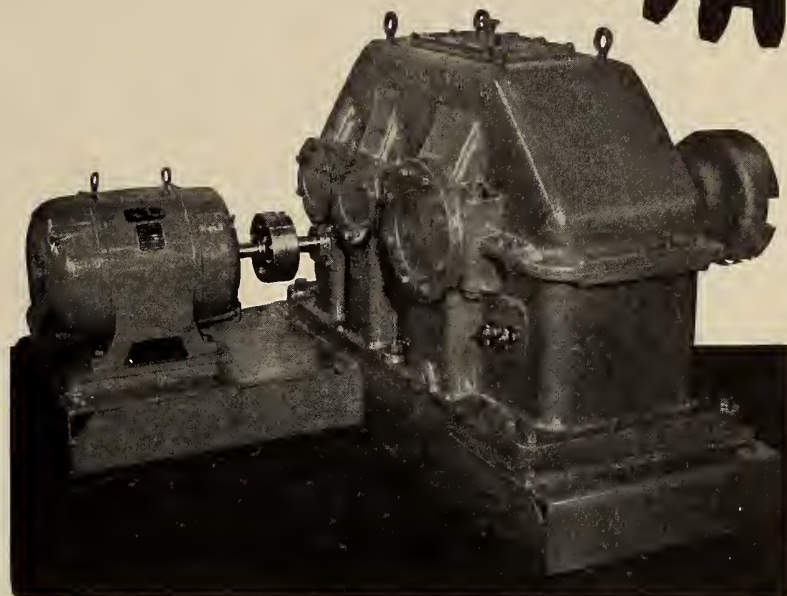
AGENTS { SIME, DARBY & CO., LTD. • SINGAPORE, KUALA LUMPUR, PENANG.  
SHAW DARBY & CO., LTD., 14 & 19 LEADENHALL ST., LONDON, E. C. 3. }

CABLES: YUBAMAN, SAN FRANCISCO SHAWDARBCO, LONDON



# Single Helical Gear Speed Reducers

Made in Canada  
for 40 Years



This is the Triple Reduction form of our new series of Single Helical Gear units. We have developed these since the war, in Single, Double and Triple Reduction, in nine sizes each. These cover the range from Speed Increasers down to a maximum reduction of about 800 to one.

*Chester B. Hamilton*

President.

## Hamilton Gear and Machine Co.

Limited

The Industrial Cut Gear Specialists

950-990 Dupont St.

TORONTO-4

Montreal Branch Office  
Edw. P. Corner, Mgr.  
1838 Dorchester St. West  
Montreal, P.Q.

Manitoba  
T. S. Taylor Machinery Co.  
197 Bannatyne Ave. E.  
Winnipeg, Man.

Alberta  
Waterous Ltd.  
Edmonton, Alta.

British Columbia  
B.C. Conveying Machinery Co.  
Geo. B. Simpson, Manager  
3300 Fraser St., Vancouver, B.C.

# When You're in Business . . .

the cost of learning goes up, especially for those who learn by trial and error.

The cost of one inferior valve may be almost insignificant, but when there are hundreds or thousands like it, those valves become a serious drain on operating budgets, cutting into profits and holding up production.



More than 80 years of constant development and research have given Jenkins Valves extra endurance, making them the longest-lasting, lowest-upkeep valves that money can buy.

We invite you to consult Jenkins Engineers on any problem concerning proper valve selection, installation, or maintenance.

Obtainable Through Leading  
Distributors Everywhere.



*Jenkins Bros*

## **JENKINS VALVES**

For industrial, engineering, marine and power plant service  
... in Bronze, Iron, Steel and Corrosion-resisting Alloys.

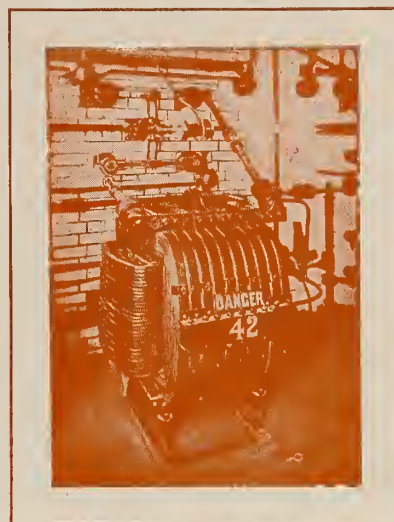
**JENKINS BROS. LIMITED**

617 St. Remi Street, Montreal.

Sales offices in Toronto, Winnipeg, Edmonton, Vancouver.



*As a guide to  
the future...  
Let's look at  
the past!*



Shown here is one of the 5000 kv-a. 3-phase, 60 cycle, 44000-2300 V. Ferranti transformers recently supplied to the Canada Cement Company.

**I**N the year 1889, at a time when 1000 volts was considered "high voltage," a number of 150 H.P. 10500 volt transformers were built and installed by Dr. S. Z. De Ferranti in the Trafalgar Square substation at the London Electric Supply Corporation Limited. The transformer illustrated above remained in operation for nearly forty years.

Dr. Ferranti also pioneered in the art of metering beginning with the development of the Ferranti ampere-hour type mercury meter in 1884, and, in 1885 supplied a number of alternating current meters to the Grosvenor Gallery, which was being prepared to supply the city of London with alternating current.

Benefitting by the wealth of experience gained in the 60-odd years since that time, the Canadian Branch, Ferranti Electric Limited, has continuously expanded its services to electrical utilities and industry at large, until "long-life and dependable service" in transformers, voltage regulators, watt-hour meters, etc. has become synonymous with the name Ferranti!

**FERRANTI ELECTRIC**  
**LIMITED**  
MONTREAL • TORONTO • WINNIPEG

\* *Eaton*  
SHOES

**Footwear that  
reflects Good Taste**

Selected calf or grain leathers,  
distinctive styling, dependable craftsmanship... a combination that promises  
smart good looks, comfort and long hard  
wear! For working, walking or a  
wonderful time, choose "Eaton"... the  
best of Eaton's Own Brands! In twenty  
new and regular styles...

**"Your best buy  
is an Eaton Brand!"**

\* only at

**EATON'S**

